

REMARKS

The courtesy of Examiner England in granting the interview of June 20, 2005, is acknowledged with appreciation. The forgoing amendment amends Claim 1. No new matter has been added and no new issues are raised. Support for the amendment can be found in the specification on page 3, lines 6-14; page 26, lines 11-15; page 41, lines 34-24; Figure 3; and through out the remainder of the application. Now in the application are Claims 1, 3-6, and 23-27, of which Claims 1, 23, and 27 are independent. Claims 2 and 22 are canceled, and Claims 7-21 have been withdrawn without prejudice to Applicant's pursuit of these Claims in a division or continuation application. Applicant contends that Claims 1, 3-6 and 23-27, as amended, are patentable and in condition for allowance as discussed below.

Claim Rejections under 35 U.S.C. § 103

For purposes of clarity in the discussion below the respective related claim sets rejected under 35 U.S.C. § 103 are discussed separately.

A. Rejection of Claim 1 under 35 U.S.C. § 103(a):

Claim 1 stands rejected as being unpatentable over U.S. Patent No. 6,108,700 of Maccabee, *et al.* (hereinafter "Maccabee") in view of U.S. Patent No. 6,356,282 of Roytman, *et al.* (hereinafter "Roytman"). Applicants respectfully traverse this rejection on the basis of the above amendments and the following arguments, and further contend that neither Maccabee nor Roytman, alone or in combination, establish a *prima facie* case of obviousness, as described below, and hence, do not detract from the patentability of the claimed invention.

Amended Claim 1 recites a method for managing network services associated with a service level management domain to provide service level management. Performance of the method in the service level domain monitors, by a plurality of monitoring agents, operational characteristics of a network service associated with a service level management domain in supporting one or more business processes under service level management. Each monitoring agent detects events of a select type of the associated operational characteristics from the network service and maps such events into alarms. Performance of the method transmits the alarms from the plurality of monitoring agents to an alarm correlation agent which analyzes the alarms to produce correlated alarms. By transmitting the correlated alarms to an enterprise management system, causes of the correlated alarms are analyzed across the network. The alarm and a correlated alarm are types of messages to an overseer that something is wrong or about to

go wrong. Performance of the method manages network services associated with a service level management domain to provide service level management. Applicant contends that neither Maccabee nor Roytman, alone or in combination, teach or suggest monitoring, by a plurality of monitoring agents, operational characteristics of a network service associated with a service level management domain and supporting one or more business processes under service level management, each monitoring agent detecting events of a select type of the associated operational characteristics from the network service and mapping such events into alarms.

The Maccabee patent discloses a method, computer program product and a program storage device embodying software for measuring of the response time of an application (including distributed applications in a client/server or Internet environment) as perceived by a user. *See*, abstract of Maccabee. Maccabee teaches that end-to-end business transactions represent all the processing stages (e.g., directives and responses) that comprise the business transaction as events contained within one or more associated transactions. Maccabee further teaches that events describe potential and actual stages of a multistage computer process. *See*, column 15, lines 21-24 of Maccabee. The invention of Maccabee measures these processing stages and the communications between them by using sensors. Maccabee does not teach or suggest an alarm correlation agent, which analyzes alarms to produce correlated alarms. Whereby an alarm and a correlated alarm are types of messages to an overseer that something is wrong or about to go wrong.

Roytman describes an alarm viewer for use with an alarm manager system in a distributed network environment. Roytman is directed towards resolving the drawbacks of flickering and resizing an alarm viewer's scrollbar as new events are displayed. In particular, the flickering and resizing of the scrollbar does not provide sufficient notice to network management operators of the arrival of new events. As such, an operator may miss very critical events. Furthermore, the displaying of a volume of new events causes continuous scroll bar flickering and resizing. This behavior makes it difficult for an operator to see all of the events as they arrive and to select an event for more details. Roytman addresses these drawbacks by providing an alarm viewer that automatically scrolls a display window so that new events always appear in the window. Roytman defines events as SNMP traps and CMIP notifications generated by management agents. Roytman is cited for transmitting correlated alarms to an enterprise management system to analyze across the network causes of the correlated alarms.

The cited references, alone or in combination, do not detract from the patentability of amended Claim 1. Maccabee teaches or suggests that events describe potential and actual stages of a multistage computer process. *See*, column 15, lines 21-24 of Maccabee. As such, Maccabee does not consider events detrimental or potentially detrimental to a transaction. In fact, Maccabee considers events an ancillary result of a transaction. That is, Maccabee does not teach or suggest that events are mapped into alarms to indicate an undesirable or potentially undesirable operational characteristic of a network service.

The Roytman patent is cited for teaching or suggesting the step of transmitting the correlated alarms to an enterprise management system to analyze across the network causes of the correlated alarms. Nevertheless, the Roytman patent fails to bridge the factual deficiencies of the Maccabee patent. That is, the Roytman patent fails to teach or suggest a step of monitoring by a plurality of monitoring agents, operational characteristics of a network service associated with a service level management domain in supporting one or more business processes under service level management, each monitoring agent detecting events of a select type of the associated operational characteristics from the network service and mapping such events into alarms.

Applicants claimed invention in contrast to Maccabee and Roytman recites a method for managing network services associated with a service level management domain to provide service management that includes, amongst other steps, the step of monitoring, by a plurality of monitoring agents, operational characteristics of a network service associated with a service level management domain and supporting one or more business processes under service level management with each monitoring agent detecting events of a select type of the associated operational characteristics from the network service and mapping such events into alarms. The alarms are a type of message to an overseer that something is wrong or about to go wrong. Consequently, the method of amended Claim 1 can alert an overseer that something is wrong or about to go wrong with a network service. For example, some of the alarms could indicate that over a period the response time of a service has crossed a threshold limitation a number of times. More specifically, the number of times the threshold crossing occurred may not have reached a number that indicates something is wrong, but can indicate that the number of crossings continues to increase and as such, without some intervening action, something will be wrong in

the future. Neither the Maccabee nor the Roytman patent, alone or in combination, teach or suggest each and every step of amended Claim 1.

Applicant further submits that there is no motivation to combine the references in order to render the claims obvious. The Maccabee patent is concerned with measuring response time of a transaction from a user's perspective. The Roytman patent is concerned with displaying alarms in a window viewed by a network overseer. Applicant contends there is no express teaching or suggestion to combine the Maccabee reference and the Roytman reference. Furthermore, Applicant contends that the Maccabee patent and the Roytman patent both lack an implicit showing that the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art to derive Applicant's invention as recited in amended Claim 1.

Applicant's invention recited in amended Claim 1 is concerned with managing network services associated with a service level domain to provide service level management. That is, the invention of amended Claim 1 is concerned with maintaining a service level of a service as defined under a service level agreement.

Assuming, *arguendo*, that those of ordinary skill in the art would find an implicit teaching to combine the Maccabee reference with the Roytman reference one would still not be able to construct the claimed invention. The end-to-end response time system of Maccabee defines events as describing the potential and actual stages of a multi-stage process and measures the time from each of the events to complete to provide an end-to-end time for a transaction from a user's perspective. The Roytman patent renders a window on a display for use by a network overseer to display alarms without having to address issues of scrolling or resizing the window to see all alarms. As such, the Maccabee patent modified in view of the teachings of the Roytman patent would provide a window capable of providing an overseer of a network with multiple end-to-end response time measurements from a user's perspective.

Hence, Applicant contends the claimed method is patentable over the Maccabee patent and the Roytman patent, alone or in combination.

Accordingly, Applicants respectfully request the Examiner to reconsider and withdraw the rejection of Claim 1 under 35 U.S.C. § 103(a).

B. Rejection of Claims 3-6 under 35 U.S.C. § 103(a):

Claims 3-6 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Maccabee in view of Roytman and in further view of U.S. Patent No. 6,230,203 of Koperda, *et al.* (hereinafter “Koperda”). Applicant respectfully traverses these rejections on the basis of the following arguments, and further contends that neither Maccabee, Roytman nor Koperda, alone or in any combination, establishes a *prima facie* case of obviousness, as described below, and hence does not detract from the patentability of Claims 3-6.

Claims 3-6 depend directly or indirectly upon amended independent Claim 1, and thereby incorporate the patentable features of amended Claim 1.

Koperda describes a system and method for providing statistics for flexible billing in a cable environment. Koperda provides an administrative system for allowing a tiered level of service for cable analog and digital services. A cable service subscriber subscribes to a defined level of service as offered by the cable provider, such as a set of premium television channels, and Internet or gaming services. Koperda uses a network control computer to detect and report parameters of these services between the cable service subscriber and the cable service provider. The service parameters comprise channel level variables between the network access device of the subscriber and the link access controller of the provider, such as peak bandwidth, bit rate and error rate. Additionally, the service parameters are identified with the specific subscriber and the subscriber's network access device. A network control computer records these statistical data of these service parameters and forwards the collected data to an administration system. The administration system polices the subscriber's purchase level of service with the statistical data and adjusts the service parameters at the channel level of the subscriber accordingly. In this manner, the service provider can limit each subscriber to his or her purchase subscription level.

In the Office Action, the Koperda patent is cited for teaching or suggesting the subject matter recited in Claims 3-6. Nonetheless, Applicant respectfully contends that the Koperda patent fails to bridge the factual deficiencies of the Maccabee patent and the Roytman patent, alone or in combination. That is, Koperda fails to teach or suggest a step of monitoring by a plurality of monitoring agents operational characteristics of a network service associated with a service level management domain and supporting one or more business processes under service level management, each monitoring agent detecting events of a select type of the associated operational characteristics from the network service and mapping such events into alarms.

Claims 3-6 depend, directly or indirectly upon amended independent Claim 1 and thereby incorporate such a step. For at least this reason, Applicant respectfully contends that neither the Maccabee patent nor the Roytman patent nor the Koperda patent, alone or in any combination, teach or suggest each and every step recited in Claims 3-6.

Accordingly, Applicant respectfully requests the Examiner to reconsider and withdraw the rejection of Claims 3-6 under 35 U.S.C. § 103(a).

C. Rejection of Claims 23, 24, and 26 under 35 U.S.C. § 103(a):

The Office Action rejects Claims 23, 24, and 26 as being unpatentable over Maccabee in view of Roytman. Applicants respectfully traverse this rejection in view of the above amendments and on the basis of the following arguments.

Claims 24 and 26 depend directly or indirectly from amended independent Claim 23, and thereby incorporate the patentable features of Claim 23.

Amended Claim 23 recites a method for monitoring a business process having at least one service associated with a service level management domain to provide service level management for an entity performing the business process. The service has a predefined state expressed as a range of values representing a grade of the service. The method includes, amongst other steps, a step of determining from an operational characteristic of the service provided by the network a value in the range of values. The value being a performance index of the grade of the service associated with a service level domain. Neither the Maccabee patent nor the Roytman patent, teach or suggest such a step.

The cited references, alone or in combination, do not detract from the patentability of amended Claim 23. Maccabee teaches or suggests that events describe potential and actual stages of a multistage computer process as it applies to availability, performance (response time), capacity, and utilization metrics. *See*, column 3, lines 25-38 and column 15, lines 21-24 of Maccabee. The Maccabee patent does not teach or suggest that a service has a predefined state expressed as a range of values representing a grade of service and determining from an operational characteristic of the service provided by the network a value in the range of values. The value being a performance index of the grade of the service associated with a service level domain.

The Roytman patent is cited for teaching or suggesting the step of transmitting the alarms from the plurality of monitoring agents to an alarm correlation agent, which analyzes the alarm to produce correlated alarms. Nevertheless, the Roytman patent fails to bridge the factual deficiencies of the Maccabee patent. That is, the Roytman patent fails to teach or suggest a service has a predefined state expressed as a range of values representing a grade of service and a step of determining from an operational characteristic of the service provided by the network a value in the range of values. The value being a performance index of the grade of the service associated with a service level domain.

Hence, Applicant contends that the Maccabee patent in view of the Roytman patent fails to establish a *prima facie* case of obviousness with which to reject Claim 23.

Applicant further submits that there is no motivation to combine the references in order to render the claims obvious as discussed above in connection with the rejection of amended Claim 1 under 35 U.S.C. § 103(a).

Accordingly, Applicants respectfully request the Examiner to reconsider and withdraw the rejection of Claim 23, 24, and 26, as amended, under 35 U.S.C. § 103(a).

D. Rejection of Claim 25 under 35 U.S.C. § 103(a):

Claim 25 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Maccabee in view of Roytman and in further view of U.S. Patent No. 6,304,892 of Bohj, *et al.* (hereinafter “Bohj”). Applicants respectfully traverse this rejection on the basis of the above amendments and the following arguments, and further contend that neither Maccabee, nor Roytman, nor Bohj, alone or in any combination, establish a *prima facie* case of obviousness, as described below, and hence do not detract from the patentability of the claimed invention.

Claim 25 depends, directly or indirectly from amended independent Claim 23, and therefore incorporates the patentable features of amended Claim 23.

Bohj teaches a management system for selective data exchanges across federated environments. A service management system in a federated system having a first and second independently administered data service system is taught by Bohj. The service management system includes a service manager that provides selective management data of the second data service system to the first data service system in accordance with a predetermined service level

agreement between the first and second data service systems without giving the first data service system complete access to the second data service system. *See*, Abstract of Bohj.

The Bohj patent is cited for teaching or suggesting determining a service level of the service, the service being defined by a service level agreement. The Bohj reference is further cited for teaching or suggesting monitoring the service level of the service to monitor the business process.

Applicant respectfully contends that the Bohj patent fails to bridge the factual deficiencies of the Maccabee patent in view of the Roytman patent. That is, like the Maccabee patent and the Roytman patent, the Bohj patent fails to teach or suggest a step of determining from the operational characteristics of a service provided by the network a value in a range of values. The value being a performance index of the grade of the service associated with the service level management domain. For at least this reason, Applicant contends that Maccabee in view of Roytman and further in view of Bohj fails to establish a *prima facie* case of obviousness. More specifically, neither Maccabee, nor Roytman, nor Bohj, alone or in any combination teach or suggest each and every step of Claim 25.

Accordingly, Applicants respectfully request the Examiner to reconsider and withdraw the rejection of Claim 25 under 35 U.S.C. § 103(a).

E. Rejection of Claim 27 under 35 U.S.C. § 103(a):

The Office Action rejects Claim 27 as being unpatentable over Maccabee in view of Roytman. Applicants respectfully traverse this rejection on the basis of the above amendments and the following arguments, and further contend that neither Maccabee nor Roytman, alone or in combination, establish a *prima facie* case of obviousness, as described below, and hence, does not detract from the patentability of the claimed invention.

Amended Claim 27 recites a method for providing an entity with service level management of a business process. The method includes, amongst other steps, a step of determining from an operational characteristic of a service provided by the network a value from a range of values. The value being a performance index of the service associated with a service level management domain indicating one of an acceptable state of the service, an unacceptable state of the service or an imminent change from an acceptable state to an unacceptable state of

the service. Neither Maccabee nor Roytman, alone or in combination, teach or suggest such a step.

The cited references, alone or in combination, do not detract from the patentability of amended Claim 27. Maccabee teaches or suggests that events describe potential and actual stages of a multistage computer process as it applies to availability, performance (response time), capacity, and utilization metrics. *See*, column 3, lines 25-38 and column 15, lines 21-24 of Maccabee. The Maccabee patent does not teach determining from an operational characteristic of the service provided by the network a value from a range of values. The value being a performance index of the service associated with a service level domain indicating one of an acceptable state of the service, an unacceptable state of the service or an imminent change from an acceptable state to an unacceptable state of the service.

The Roytman patent is cited for teaching or suggesting the step of transmitting the alarms from the plurality of monitoring agents to an alarm correlation agent, which analyzes the alarm to produce correlated alarms. Nevertheless, the Roytman patent fails to bridge the factual deficiencies of the Maccabee patent. That is, the Roytman patent fails to teach or suggest the step determining from an operational characteristic of the service provided by the network a value from the range of values. The value being a performance index of the service associated with a service level domain indicating one of an acceptable state of the service, an unacceptable state of the service or an imminent change from an acceptable state to an unacceptable state of the service.

Hence, Applicant contends that the Maccabee patent in view of the Roytman patent fails to establish a *prima facie* case of obviousness with which to reject amended Claim 27.

Applicant further submits that there is no motivation to combine the references in order to render the claims obvious as discussed above in connection with the rejection of amended Claim 1 under 35 U.S.C. §103(a).

Accordingly, Applicants respectfully request the Examiner to reconsider and withdraw the rejection of Claim amended 27 under 35 U.S.C. § 103(a).

CONCLUSION

In light of the aforementioned arguments, the Applicant contends that each of the Examiners rejections has been adequately addressed and all of the pending claims are in condition for allowance. Accordingly, the Applicant respectfully requests reconsideration, withdrawal of all grounds of rejection, and allowance of all of the pending claims.

Should the Examiner feel that a telephone conference with Applicant's attorney would expedite prosecution of this application, the Examiner is urged to contact the Applicant's attorney at the telephone number identified below.

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Respectfully submitted,

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